

IN THE CLAIMS:

1 – 12 (Canceled)

13. (Previously Presented) An apparatus for cooling an optical fiber drawn from an optical fiber preform in drawing systems mounted to an optical fiber draw tower, said apparatus comprising:

a main body extending in the longitudinal direction of the fiber;

an upper gas feeding section over said main body, wherein said upper gas feeding section includes a first hollow rotary body having at least one radial passageway for gas; and

a gas feeder for supplying, from one or more respective positions axially around the upper gas feeding section, a gas feed to the at least one passageway, said apparatus being configured to rotate said rotary body to cause non-uniform delivery of the gas to the fiber to create a temperature difference to reduce polarization mode dispersion of the fiber.

14. (Currently Amended) The apparatus according to Claim 17, wherein said slit is disposed as to linearly extend along ~~extended about the~~ longitudinal direction of the optical fiber.

15. (Currently Amended) The apparatus according to Claim 17, wherein said slit is inclined at an angle ~~about the~~ from a longitudinal direction of the optical fiber.

16. (Currently Amended) The apparatus according to Claim 17, wherein said slit is formed in a spiral disposed with respect to the optical fiber so as to axially extend in ~~spirally provided about the~~ longitudinal direction of the optical fiber.

17. (Previously Presented) The apparatus according to Claim 13, wherein said rotary body has a radially inner surface and at least one slit in said inner surface along the longitudinal direction of the fiber.

18. (New) An apparatus for cooling an optical fiber drawn from an optical fiber preform in drawing systems mounted to an optical fiber draw tower, said apparatus comprising:

a main body extending in the longitudinal direction of the fiber;

an upper gas feeding section over said main body, said upper gas feeding section including a first hollow rotary body having a plurality of radial passageways for gas and further includes a plurality of gas feeding ports located at respective positions axially around the upper gas feeding section;

on/off switches respectively connected to the plural ports; and

a gas feeder for supplying, by means of the plural ports, a gas feed to the plural passageways, said apparatus being configured to operate the switches so as to rotate said gas feed to cause non-uniform delivery of the gas to the fiber to create a temperature difference to reduce polarization mode dispersion of the fiber.

19. (New) The apparatus according to Claim 18, wherein said rotary body has a radially inner surface and at least one slit in said inner surface along the longitudinal direction of the fiber.

20. (New) The apparatus according to Claim 19, wherein said slit is inclined at an angle from the longitudinal direction of the optical fiber.

21. (New) The apparatus according to Claim 19, wherein said slit is formed in a spiral disposed with respect to the optical fiber so as to axially extend in a longitudinal direction of the optical fiber.

22. (New) The apparatus according to Claim 19, wherein a slit of said at least one slit forms part of a passageway of the plural passageways.

23. (New) The apparatus according to Claim 18, configured such that the operating of the switches involves turning the switches on and off periodically.

24. (New) The apparatus according to Claim 18, further configured such that the operating of the switches involves turning the switches on and off sequentially so as to create the rotation of said gas feed.

25. (New) The apparatus according to Claim 17, wherein a slit of said at least one slit forms part of a passageway of the at least one passageway.

26. (New) An apparatus for cooling an optical fiber drawn from an optical fiber preform in drawing systems mounted to an optical fiber draw tower, said apparatus comprising:

a main body longitudinally hollow for receiving the optical fiber; and

an upper gas feeding section over an end of said main body, wherein said upper gas feeding section includes a first rotary body, said rotary body being hollow so as to define an inner surface and for receiving the optical fiber, said rotary body having at least one slit in said inner surface along a longitudinal direction of the optical fiber and at least one opening extended radially toward an axial center of the rotary body, said apparatus being configured to receive a gas feed communicating, while the rotary body rotates, gas through said opening radially toward said center to reduce polarization mode dispersion in the optical fiber.

27. (New) The apparatus of claim 26, wherein said at least one opening comprises a plurality of openings, and wherein said at least one slit comprises a plurality of slits, each of the plural openings being partially formed by a slit of the plural slits.